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DOI:

[10.1080/14739879.2019.1588787](https://doi.org/10.1080/14739879.2019.1588787)

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Document Version

Peer reviewed version

Citation for published version (Harvard):

Taylor, C, McManus, C, Davison, I, Gill, P & Lilford, R 2019, 'Using recruitment and selection to build a primary care workforce for the future', *Education for Primary Care*, vol. 30, no. 3, pp. 128-132.
<https://doi.org/10.1080/14739879.2019.1588787>

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Publisher Rights Statement:

Checked for eligibility: 11/04/2019

This is an Accepted Manuscript of an article published by Taylor & Francis in *Education for Primary Care* on 04/04/2019, available online:
<http://www.tandfonline.com/10.1080/14739879.2019.1588787>

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Using recruitment and selection to build a primary care workforce for the future

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Word count (main text): 2,131 (including box)

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12 **Abstract**

13 Recruitment and selection are critical components of human resource management, and influence both
14 the quantity and quality of the healthcare workforce. In this article, we use two different examples of
15 primary care workers, General Practitioners in the UK and Community Health Workers in low- and
16 middle- income countries, to illustrate how recruitment and selection are and could be used to
17 enhance the primary care workforce in each setting. Both recruitment and selection can be costly, so
18 when funding is limited, decisions as to how to spend the human resources budget must be made. It
19 could be argued that human resource management should focus on recruitment in a *seller's market* (an
20 insufficient supply of applicants) and on selection in a *buyer's market* (sufficient applicants but
21 concerns about their quality). We use this article to examine recruitment and selection in each type of
22 market, but also to highlight the interactions between these two human resource management
23 decisions. We argue that both recruitment and selection must be considered in both types of market,
24 particularly in sectors when workers' labour impacts upon population health. We also note the paucity
25 of high quality research in recruitment and selection for primary care and the need for rigorous study
26 designs such as randomised trials.

27 **Key words**

28 General practice, Community Health Workers, selection, recruitment, primary care

29

Introduction

Human capital, in terms of both the quantity and quality of health workers, is a critical resource for any health system and primary care is no exception.(1) Maximising the contribution of human capital requires attention to all of the components of human resource management, including training, supervision and performance management, but must begin with the building blocks of recruitment and selection. *Recruitment* is primarily concerned with increasing the number of qualified individuals applying for the posts available and *selection* with choosing which of these applicants should be offered posts. The importance of recruitment and selection should not be under-estimated, because all subsequent human resource management activity can only work with the “raw materials” available following these processes. In this article, we aim to use two very different examples of primary care providers, General Practitioners (GPs) in the UK and Community Health Workers (CHWs) in low- and middle- income countries (LMICs), to illustrate why and how recruitment and selection can be used both separately and conjointly to positively influence the quantity and quality of the primary care workforce. While we use the existing evidence to guide our arguments where available, we identify and justify a need for further research in this area. We provide more information on the two types of primary care provider in Box 1.

We have chosen these providers because of our personal experiences of working with them on research projects related to service provision, recruitment, selection and training (see Davison et al.(2) and Thomas et al.(3) for UK General Practice, Plowright et al.(4) for CHW training in South Africa and Taylor et al.(5) for CHW service provision in sub-Saharan Africa; an MRC-funded study on CHW selection in Kenya, Malawi and Ghana is currently on-going). Such research stems from the challenges associated with recruitment and selection faced by each provider, making them appropriate examples to use in this article. There is a lack of GPs in the UK(6), with around one vacancy reported for every two practices in England between April and September 2016(7) and 10% of UK GP training posts unfilled between 2015 and 2017.(8) In contrast, there is often high competition for CHW posts in many LMIC CHW programmes because the role confers status to those selected and provides an

income and opportunities for career progression, but there are also concerns about the quality of care provided by CHWs.(9).

Box 1: UK General Practice and CHWs in LMICs

UK General Practice

Those wishing to practise as GPs in the UK must successfully complete a three-year training programme and obtain membership of the Royal College of General Practitioners via examination. To gain entry into the General Practice training programme, doctors need at least two years of post-graduate experience in the health service (or, for international applicants, be of equivalent professional standing). The national selection process has three stages: (1) A check of eligibility to train as a GP, (2) computer-based tests of clinical problem solving and professional dilemmas, and (3) a face-to-face selection centre comprising three simulated scenarios and a written exercise. More details can be found at: <https://gprecruitment.hee.nhs.uk/>

CHWs in LMICs

CHWs provide basic health advice and care, and linkage to formal health care for individuals and families living in their own communities. There are a wide variety of CHW programmes in LMICs, with their scale and scope determined by local needs as well as provider objectives and funder priorities. (Many programmes are funded and/or operated by international Non-government organisations although some, such as the Ghanaian programme, are led by the national government.) The health areas most frequently addressed by CHWs are antenatal and neonatal care, child health and HIV/AIDS. The initial training programme for CHWs is usually short (2-3 weeks), after which CHWs tend to work alone with minimal supervision but some on-going training. There is no standardised approach to recruitment and selection across programmes, although almost all include some form of community involvement. The CHW programmes with which we have worked have also used various combinations of written tests and face-to-face interviews to select CHWs.

The interaction between recruitment and selection in determining the quantity and quality of the primary care workforce

It could be argued that human resource management should focus on recruitment when there is a *seller's market*, i.e. an insufficient quantity of health workers, as for UK General Practice, and on selection when there is a *buyer's market*, i.e. sufficient supply (or high competition for posts) but concerns about health worker quality, as for CHWs in many LMICs. However this can never be an unequivocal distinction, particularly in health systems where there are concerns about *quantity* and *quality*. Where there is high competition for posts (a buyer's market), recruitment strategies should target those most likely to be excellent health workers to discourage "have a go" applicants who are unlikely to be successful. All selection processes need to consider *gating*, i.e. identifying applicants who would not be competent in post. This is important to protect patients and the public from below-standard health workers: those responsible for selection – particularly in a seller's market - may need to balance leaving posts unfilled with "lowering the bar" and enhancing the pre-service training provided.

The recruitment/selection interaction in practice

Efforts to enhance recruitment to UK General Practice have involved changes to the selection process. For example, a "Stage 3 bypass" system was introduced in 2016, whereby the top-scoring applicants on the Stage 2 computer-based tests of clinical problem solving and professional dilemmas would automatically be offered posts rather than having to attend the Stage 3 face-to-face selection centre. This may mean junior doctors are more likely to accept an offer because they feel "wanted" by General Practice. Another GP recruitment strategy is enabling more detailed geographical preferences (i.e. choosing a district rather than just a region). This second strategy may encourage junior doctors to apply for General Practice rather than to other specialties (particularly if they continue a regional system), because location – and not just the job role - does matter to potential applicants.⁽²⁾ However the selection process may need to be adapted to ensure that the "extra" applicants (those who would otherwise have applied to other specialties) are truly motivated to be GPs in the long-term rather than being attracted by the benefits being offered by the recruitment initiatives. This may be pertinent

given attempts to make transferring between specialty training programmes easier. To consider the potential impact of such strategies on both recruitment and longer-term outcomes, studies of junior doctors' motivation may be relevant, and future strategies could be designed using behavioural theory to help achieve the desired outcomes and mitigate undesirable ones. We can learn from work on CHW motivation here, with good studies examining the determinants of motivation(10) and using behavioural theory to inform intervention design.(11) Similarly, changes to selection processes for CHWs may have impacted on the recruitment of potential CHWs. For example, a policy change led to women being prioritised in the CHW selection process in Kitgum district of Uganda(12). However, well-intentioned initiatives can have unintended consequences: this policy could discourage those males who would make excellent CHWs from applying.

Designing effective recruitment and selection strategies

Designing effective recruitment and selection strategies – and striking the right balance between them - is important because both are costly activities. It is also challenging because a selection process needs to be more than just cost-effective: it also needs to be acceptable – and trade-offs between cost-effectiveness and acceptability may be required. For example, the need for members of the local community to be involved in the selection of their CHWs is frequently highlighted.(13) However, in terms of maximising CHW performance, such involvement can be detrimental if nepotism influences decision-making.(14) The use of Stage 2 scores only to select GP trainees involves a very different trade-off as there is evidence that this approach is cost-effective, with no impact on training outcomes (15), but acceptability could be low because of the high face validity of the relatively expensive face-to-face Stage 3 selection centres.

There is relatively little evidence on the recruitment and selection of CHWs in LMICs. We have been unable to find any peer-reviewed studies comparing the effectiveness of different selection criteria for CHWs. In terms of recruitment, there is one RCT of different strategies for attracting applicants for CHW posts.(16) The selection process for General Practice in the UK, meanwhile, has been well

studied,(2, 17) although there are some concerns about the quality of this work.(2, 18) A recent systematic review which considered the effectiveness of strategies to enhance GP recruitment reported a scarcity of studies examining specific recruitment practices; those that were identified were reported to be of poor methodological quality with no RCTs.(19) More well-designed mixed-methods research is therefore needed to identify the most cost-effective, fair and acceptable recruitment and selection processes, particularly for CHWs. Yet having to wait for the results of such research would not help those who need to use recruitment and selection to enhance the primary care workforce in the immediate future.

Potential interim solutions for sellers' and buyers' markets

A seller's market, such as UK General Practice, may require innovative recruitment strategies. Recruitment may begin sometime before applications are made; the importance of General Practice experience in medical schools for encouraging students to consider it as a career has been highlighted.(2) Such strategies should be subjected to thought experiments or pre-implementation evaluation (20) to consider if they may attract those motivated by the strategy and not the role itself. Selection processes need to focus on gating; at a local level, data to help design selection processes to achieve this aim could be obtained by reviewing the selection performance of those who are currently struggling on the job with those who are excelling to identify if any particular component of the selection process can be used to distinguish between these groups; a case-control style study. In the UK, the UKMED database (21) is now enabling national-level cohort studies with similar aims of predicting future performance. Ensuring a minimum standard is achieved during selection is important, but determining what that standard should be is not a simple task.

In a buyer's market, such as for CHWs, the recruitment strategy does not have to be so extensive. To minimise selection costs recruitment strategies should nevertheless be targeted at those most likely to be excellent performers (as opposed to "have a go" applicants) based on current knowledge. Selection processes should be tuned to distinguish excellent from merely competent performers, and therefore need to be more challenging than those focusing on distinguishing competence from incompetence in a seller's market. Relatively more investment in selection vis-à-vis recruitment is therefore likely to

be fruitful in a buyer's market providing it is directed at methods with evidence of predictive validity, such as multiple mini interviews.(18) However such methods need to be culturally-sensitive and context-specific. A cost-minimisation strategy in LMICs could include using school examination results based on evidence of an academic backbone for UK medical careers, although the generalisability of this finding to LMICs would need to be considered.(22) A further option advocated for CHWs is to over-appoint and then formally hire those who meet the required standard in the end-of-training assessments.(23) The aims and requirements for recruitment and selection in each type of market are summarised in Table 1.

Conclusion

Research and taking immediate action are not mutually exclusive; recruitment and selection cannot wait, but the need for research to support future development is clear and such research needs to consider and therefore evaluate the interactions between recruitment and selection.(13) Designing a recruitment and selection strategy that is cost-effective, fair, acceptable and has the intended effects on the applicant pool is a challenging undertaking. Yet even small steps towards this goal would help the house of human capital for primary care to be built on rocks rather than on sand. Such work requires collaboration, for example between medical schools, Foundation Schools and the Royal College of General Practitioners in the UK to promote General Practice during initial medical training or between different CHW programme providers in LMICs to share good practice and avoid reinventing the wheel (although of course variability between CHW programmes means that any potential changes need to be assessed against local context prior to implementation). The idea of sharing good practice is partly taken from efforts at undergraduate level, where the UK Medical Schools Council Selection Alliance is aiming to develop multiple mini interview stations for sharing across medical schools; all such collaborations would benefit from early engagement with researchers. Ultimately, recruitment and selection are like many other things in healthcare, in that they can often only be properly evaluated using RCTs, rare as such studies are in medical education. Such RCTs should include a qualitative component so that both context and mechanisms can be explored, as well as outcomes evaluated.

188 Funding details

189 CB and RL are investigators on a MRC Public Health Intervention Development grant
190 (MR/N000999/1) to develop a selection tool for CHWs in sub-Saharan Africa. [This grant is jointly](#)
191 [funded by the UK Medical Research Council \(MRC\) and the UK Department for International](#)
192 [Development \(DFID\) under the MRC/DFID Concordat agreement.](#)

193 CB and RL are supported by the National Institute for Health Research (NIHR) Collaboration for
194 Leadership in Applied Health Research and Care – West Midlands (NIHR CLAHRC WM). The
195 views expressed in this article are those of the author(s) and not necessarily those of the NHS, the
196 NIHR, or the Department of Health and Social Care.

197 Conflicts of Interest/Disclosure statement

198 The authors declare that they have no conflicts of interest.

199 Biographical note

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210 people who live in slums.

References

1. World Health Organization. Global strategy on human resources for health: Workforce 2030. Geneva; 2016.
2. Davison I, McManus C, Taylor C. Evaluation of GP Specialty Selection. Health Education England; 2016.
3. Thomas H, Davison I, Gee H, Grant J, Taylor C. The fairness, effectiveness and acceptability of selection for specialty training in the UK. *British Journal of Hospital Medicine*. 2013;74(1):47-51.
4. Plowright A, Taylor C, Davies D, Sartori J, Lewando Hundt G, Lilford R. Formative evaluation of a training intervention for community health workers in South Africa: a before and after study. *PLoS ONE*. 2018;In press.
5. Taylor C, Griffiths F, Lilford R. Affordability of comprehensive community health worker programmes in rural sub-Saharan Africa. *BMJ Global Health*. 2017;2(3):e000391.
6. Hillier M, Bacon R, Boswell P, Elphicke C, Evans C, Flint C, et al. Access to General Practice: progress review. House of Commons Committee of Public Accounts. . London; 2017.
7. NHS Digital. General and personal medical services, England 2006-2016, as at 30 September, Experimental statistics 2017 [Available from: <https://digital.nhs.uk/catalogue/PUB23693>].
8. GP National Recruitment Office. GP Recruitment 2018 [Available from: <https://gprecruitment.hee.nhs.uk/>].
9. Kok M, Dieleman M, Taegtmeier M, Broerse J, Kane S, Ormel H, et al. Which intervention design factors influence performance of community health workers in low- and middle-income countries? *Health Policy Plan* 2014:1-21.
10. Gopalan SS, Mohanty S, Das A. Assessing community health workers' performance motivation: a mixed-methods approach on India's Accredited Social Health Activists (ASHA) programme. *BMJ open*. 2012;2(5):e001557.
11. Strachan DL, Källander K, Nakirunda M, Ndima S, Muiambo A, Hill Z. Using theory and formative research to design interventions to improve community health worker motivation, retention and performance in Mozambique and Uganda. *Human resources for health*. 2015;13(1):25.
12. Geoffrey B, Joab T, Benon M, Mark L, Ceasar MM, Edgar T. Utilization of the Community Health Worker Assessment and Improvement Matrix to Strengthen Village Health Team Systems in Uganda: A Case for Kitgum District. *Science Journal of Public Health*. 2017;5(4):275.
13. Jaskiewicz W, Deussom R, Perry H, Crigler L. Recruitment of community health workers. Washington, DC: MCHIP; 2014.
14. Turinawe EB, Rwemisisi JT, Musinguzi LK, de Groot M, Muhangi D, de Vries DH, et al. Selection and performance of village health teams (VHTs) in Uganda: lessons from the natural helper model of health promotion. *Human Resources for Health*. 2015;13(1):73.
15. Taylor C, Davison I, McManus I. Would changing the selection process for GP trainees stem the workforce crisis? A cohort study using multiple-imputation and simulation. *BMC Medical Education*. 2018;In press.
16. Ashraf N, Bandiera O, Lee SS. Do-gooders and go-getters: career incentives, selection, and performance in public service delivery. *STICERD Discussion Papers Series*. 2014;54.
17. Patterson F, Lievens F, Kerrin M, Munro N, Irish B. The predictive validity of selection for entry into postgraduate training in general practice: evidence from three longitudinal studies. *British Journal of General Practice*. 2013;63(616):e734-e41.
18. Patterson F, Knight A, Dowell J, Nicholson S, Cousans F, Cleland J. How effective are selection methods in medical education? A systematic review. *Medical Education*. 2016;50(1):36-60.
19. Verma P, Ford JA, Stuart A, Howe A, Everington S, Steel N. A systematic review of strategies to recruit and retain primary care doctors. *BMC Health Services Research*. 2016;16(1):126.
20. Brown C, Hofer T, Johal A, Thomson R, Nicholl J, Franklin BD, et al. An epistemology of patient safety research: a framework for study design and interpretation. Part 4. One size does not fit all. *Qual Saf Health Care*. 2008;17.
21. Dowell J, Cleland J, Fitzpatrick S, McManus C, Nicholson S, Oppé T, et al. The UK medical education database (UKMED) what is it? Why and how might you use it? 2018;18(1):6.
22. McManus I, Woolf K, Dacre J, Paice E, Dewberry C. The academic backbone: longitudinal continuities in educational achievement from secondary school and medical school to MRCP (UK) and the Specialist Register in UK medical students and doctors. *BMC Med*. 2013;11(1):242.
23. Ballard M, Schqarz R, Johnson A, Church S, Palazuelos D, McCormick L, et al. Practitioner expertise to optimize community health systems 2017 [Available from: <https://www.chwimpact.org>].

269 **Table 1: Recruitment and selection in a seller's and a buyer's market**

	Seller's market	Buyer's market
Recruitment	<p><u>Aim</u>: Encourage those who may not have considered the career to apply</p> <p><u>Requires</u>: Innovative, intensive strategies <i>before</i> posts are advertised</p>	<p><u>Aim</u>: Discourage “have a go” applicants</p> <p><u>Requires</u>: Targeting at those most likely to perform well</p>
Selection	<p><u>Aim</u>: Distinguish competence from incompetence</p> <p><u>Requires</u>: Focus on gating by establishing a minimum standard that balances sensitivity and specificity appropriately</p>	<p><u>Aim</u>: Distinguish excellence from competence</p> <p><u>Requires</u>: Intensive, challenging selection process and/or over-appointing and use of a probationary period</p>

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